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EXAMINER	
MOORE, IAN N	
ART UNIT	**PAPER NUMBER**
2661	

DATE MAILED: 09/08/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/763,048	HACHENBERGER ET AL.	
	Examiner	Art Unit	
	Ian N Moore	2661	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *14 February 2001*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *11-20* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *11-13 and 17-20* is/are rejected.

7)☒ Claim(s) *14-16* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☒ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date 4.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

1. The preliminary amendment filed on 2-14-2001 (paper # 2) is received.

Priority

2. It is noted that this application appears to claim subject matter disclosed in prior Application No. Germany 19836888.7, filed August 14, 1998 and PCT/EP99/05619, filed August 3, 1999. A reference to the prior application **must be inserted as the first sentence of the specification of this application** or in an application data sheet (37 CFR 1.76), if applicant intends to rely on the filing date of the prior application under 35 U.S.C. 119(e) or 120. See 37 CFR 1.78(a).

Drawings

3. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, "**a downstream amplitude threshold switch**" (claim 11, line 4 and 13), "**an output signal**" (claim 11, step e), "**a trigger signal**" (claim 11, step f), " **a delay time**" (claim 13, line 4), and "**concrete signal transmit time**" (claim 13, line 5) must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled,

the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Specification

4. This application does not contain an abstract of the disclosure as required by 37 CFR 1.72(b). An abstract on a separate sheet is required.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

5. Claim 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over Petch (U.S. 6,621,813) and Hudson (U.S. 5,602,832) in view of Hikoso (U.S. 5,745,529).

Regarding claim 11, Petch'813 discloses a method for synchronization in a full-duplex-capable radio transmission system with CDMA access with TDD mode (see FIG. 1,

wireless communication network 10, which utilizes CDMA transmission technique and TDD method; see col. 3, lines 60-62, see col. 4, lines 1-9), having a central radio base station (see FIG. 1, BS 12) and a plurality of subscriber stations which are independent of one another (see FIG. 1, plurality of MS 14), a matched filter (see FIG. 6, a match filer, MF 165) with a downstream threshold value switch (see FIG. 6, Early/Late comparator 170), being assigned in each case to the individual subscriber stations at a receiver end (see FIG. 6, Radio Interface module 154 of the remote MSs), the method comprising the steps of:

a) generating a preamble at the radio base station which is uniform for the radio transmission system (see col. 2, lines 64-67; col. 3, lines 5-9; note that the base station generates a preamble which consists of the timing information, and the timing information is uniform for the wireless communication system since the base station synchronizes its timing form GPS (see FIG. 48, GPS receiver 48));

b) transmitting the preamble synchronously in all telecommunications channels to all subscriber stations before actual user data transmission (see col. 2, lines 65 to col. 3, lines 2, 5-12; see col. 5, lines 25-35; note that the base station transmits the preamble via all channels which corresponds to all remote MSs by way of broadcasting signals or polling signals. Note that preamble is always transmitted before the user data transmission);

c) receiving the preamble at the subscriber station (see col. 2, lines 65 to col. 3, lines 2, 5-12; see col. 10, lines 41-53; note that a preamble is received at remote MS);

d) feeding the received preamble to an input of the respective matched filter of a subscriber station (see FIG. 6, Match Filter MF 165 in the Radio Interface module 154 of

remote MS; see col. 9, lines 1-9, see col. 10, lines 2-14; note that a received preamble is inputted into MF 165 via receive interface 152);

e) forwarding an output signal of the matched filter (see FIG. 6, a timing pulse signal 167 of the MF 165) to the threshold value switch (see FIG. 6, Early/late comparator, E/L 170; note that a timing pulse signal of the match filter MF 165 is inputted into EL comparator 170; note that E/L comparator has a capability to obtain threshold/reference value and switch signals, thus it is a threshold value switch); see col. 11, lines 3-9; and

f) generating a trigger signal (see FIG. 6, Adjustment signal 171) at the threshold value switch when a predefinable threshold Trl (see FIG. 6, expected/predefine Reference/threshold time signal 180) is exceeded (see col. 11, lines 5-16; note that E/L comparator compares the timing pulse signal 167 with the expected reference time signal 180 in order to determine whether the timing pulse signal is early or late. After comparing and determining that the signal 167 is exceeded the reference/expected threshold signal 180, the adjustment signal 171 is outputted to the mobile controller 178).

Petch'813 does not explicitly disclose spreading with a specific maximum sequence or gold sequence.

However, the above-mentioned claimed limitations are taught by Hudson. In particular, Hudson'832 teaches a) generating at the radio base station (see FIG. 1, CDM transmitter of the base station; Abstract) by spreading with a specific maximum sequence or gold sequence (see FIG. 7, a specific spreading sequence, i.e., gold code; note that in order to transmit a spreading sequence, the source data (see FIG. 1, source 11) is be spreaded with a gold spreading sequence or code; see col. 2, lines 60 to col. 3, lines 16) which is uniform for

the radio transmission system (see col. 1, lines 65 to col. 2, lines 25; note that the base station transmits each data signal with a spreading sequence, which is a gold code through the common channel, which is uniform/consistent in the cellular communication system).

Note that Petch'813 teaches the base station sending a preamble. Hudson'832 teaches base station sending spreading gold sequence via common channel, and the gold sequence and the common channel are consistent for the cellular communication system. Thus, Petch'813's preamble can be modified with Hudson'832's gold spreading sequence. In view of this, having the system of Petch'813 and then given the teaching of Hudson'832, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the system of Petch'813, for the purpose of sending the spreaded gold sequence in the common channel, as taught by Hudson'832, since Hudson'832 states the advantages/benefits at col. 1, lines 30 to col. 2, lines 10 that it would provide a mechanism to recover the broadcast signal by means of the match sequence with received signal. The motivation being that by utilizing the gold spreading sequence when transmitting from the base station, it will enhance the receiver (i.e. mobile station) capability to easily matches the gold sequence to recover the broadcast signal.

Neither Petch'813 nor Hudson'832 explicitly discloses amplitude threshold value switch.

However, the above-mentioned claimed limitations are taught by Hikoso'529. In particular, Hikoso'529 teaches a match filter (see FIG. 6, Digital Match filter 15 or 16) with amplitude threshold value switch (see FIG. 6, Comparator part 41; see col. 7, lines 30-45; note that the output of the matched filter is send to the comparator portion 41, which

compares the signal amplitude threshold with the received signal amplitude. Thus, comparator portion 41 is the signal amplitude threshold portion switch).

In view of this, having the combined system of Petch'813 and Hudson'832, then given the teaching of Hikoso'529, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the combined system of Petch'813 and Hudson'832, for the purpose of providing an signal amplitude comparator portion which has a capability to compare the calculated amplitude with threshold and switch the data, as taught by Hikoso'529, since Hikoso'529 states the advantages/benefits at col. 2, lines 35 to col. 3, lines 45 that it would improve the performance of the receiver. The motivation being that by determining whether the received amplitude exceeds the threshold, it can improve the performance of the receiver since processing of the small signal components, which can be eliminated.

6. Claim 12 is rejected under 35 U.S.C. 103(a) as being unpatentable over Petch'813, Hudson'832, Hikoso'529, as applied to claim 11 above, and further in view of well established teaching in art.

Regarding claim 12, Petch'813 discloses the subscriber station synchronization informtion, which is determined by means of a priori knowledge of burst structure (see FIG. 6, MF 165; note that a match filter determines the received synchronization information data structure by matching n-bit preamble with stored n-bit pattern; see col. 10, lines 10-24) and duration (see FIG. E/L 171; note that E/L 171 determines the synchronization information data duration by comparing against expected arrival time; see col. 11, lines 5-10).

Neither Petch'813 nor Hudson'832 explicitly discloses averaging.

However, the above-mentioned claimed limitations are taught by well-established teaching in art. In particular, well-established teaching in art teaches averaging over time. Note that averaging is used when determining a value, which is neither maximum nor minimum value. Averaging is used in order to smooth out the spikes (i.e. extreme high and low). Thus, the subscriber station synchronization information received at the mobile station can be average over time before adjusting the timing in order to avoid premature adjusting of timing.

In view of this, having the combined system of Petch'813, Hudson'832 and Hikoso'529, then given the teaching of well established teaching in art, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the combined system of Petch'813, Hudson'832 and Hikoso'529, for the purpose of providing averaging over time, as taught by well established teaching in art. The motivation being that by averaging over time, it can provide the optimal received signal and avoid premature adjusting of timing.

7. Claims 13 and 17-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Petch (U.S. 6,621,813) and Hudson (U.S. 5,602,832), as applied to claim 11 above, further in view of Esmailzadeh (U.S. 6,259,724) and well established teaching in art.

Regarding claim 13, the combined system of Petch'813, Hudson'832, and Hikoso'529 discloses the radio base station as described above in claim 11. Hudson'832 teaches transmitting of specific gold sequences as described above in claim 11

Neither Petch'813, Hudson'832, nor Hikoso'529 explicitly discloses providing the radio base station (see FIG. 2, Base Station antenna 12 and transceiver 14) with a matched filter see FIG. 3, Matched Filter 13) with an amplitude threshold value switch (see FIG. 3, Accumulator 15; note that accumulator 15 determines whether the output of matched filter 13 exceeds a predetermine threshold with respect of magnitude/amplitude and relative phase of the signals. Thus, it is a amplitude threshold switch; see col. 5, lines 30-65), and

in each case transmitting from a subscriber station (see FIG. 2, Mobile station 16 or 18) a specific synchronization information (see FIG. 1, preamble with L symbols) to the radio base station (see FIG. 1, base station antenna 12 and transceiver 14) within a delay time of the actual user data transmission (see FIG. 1, a preamble is in the access request frame, and it is send before the actual user data transmission, and the mobile station determines starting time of the access request frame upon base station's broadcast signal. Thus, the preamble must be send by the mobile station before the actual user data transmission within allowable delay time when synchronizing with the base station in order to synchronously transmit the actual user data; see col. 4, lines 15-55),

receiving the synchronization information at the radio base station (see col. 3, lines 64-67, col. 4, lines 6-25; the preamble with synchronization information is received at the base station), and

determining concrete signal (see FIG. 3, the output of matched filter 13 or see FIG. 7, matched filter output samples Sij) by matched filtering with an upper transgression of an threshold value being evaluated as a trigger criterion at the filter output (see col. 5, lines 35-65, see col. 8, lines 1-24; note that the received signal is passed thought the matched filter.

Note that the purpose of the matched filter is to match with upper threshold value and evaluates as a trigger to output the result to the accumulator).

In view of this, having the combined system of Petch'813 and Hudson'832, then given the teaching of Esmailzadeh'724, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the combined system of Petch'813 and Hudson'832, for the purpose of providing a matched filter with an accumulator threshold switch to the base station, as taught by Esmailzadeh'724, since Esmailzadeh'724 states the advantages/benefits at col. 2, lines 45-67 that it would increase the throughput and reduce the inefficiencies. The motivation being that by implementing match filter and accumulator for determining the access request before the transmission of data, it can reduce the failed random access attempts and thus increase throughput.

Neither Petch'813, Hudson'832, nor Esmailzadeh'724 explicitly discloses the base station determining concrete signal transit time between the radio base station and the corresponding subscriber station.

However, the above-mentioned claimed limitations are taught by well-established teaching in art. In particular, well-established teaching in art teaches the base station determining concrete signal transit time between the radio base station and the corresponding subscriber station. Petch'813 teaches the mobile station determining the concrete signal transmit time (i.e. the adjustment time) by comparing the base station timing clock with mobile station master clock, see col. 11, lines 15-37. Petch'813 also discloses the receiving timing from GPS, in FIG. 2. Esmailzadeh'724 teaches the base station receiving the signal from the mobile station and determining synchronization information utilizing the matched

filter. It is well known in the art that the base station also has a capability to perform the same method of determining the synchronization adjustment time or concrete time between its time and the mobile station. Moreover, Esmailzadeh'724 teaches the receiving a preamble with synchronization information at the base station. Hudson'832 teaches sending a preamble with a spreading specific gold sequence/code from the base station. Thus, it is clear that Esmailzadeh'724 base station can receive a specific gold sequence.

In view of this, having the combined system of Petch'813, Hudson'832 and Esmailzadeh'724, then given the teaching of well established teaching in art, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the combined system of Petch'813, Hudson'832 and Esmailzadeh'724, for the purpose of providing the base station determining adjust/concrete signal transit time between the radio base station and the corresponding subscriber station, as taught by well established teaching in art. The motivation being that by determining the adjust/concrete signal transmit time between the radio base station and the subscriber station, it can improve the synchronization between mobile station and the base station.

Regarding claim 17, Petch'813 discloses wherein adjacent radio transmission systems (see FIG. 1, cellular system cells, each cell comprises one BS 12 and three MS 14 in each boundary 13) at least one of operates in different frequency positions (note that at least one cell must operate in different frequency positions). Hudson'832 discloses the base station in a cell sending different spread sequences in each case (see FIG. 1, different sequence are sent in each case for transmission from the base station).

Well-established teaching in art teaches that the base station in a cell use spread sequences from different code family. Note that it is well known in the art that the base station uses different families of spreading codes to spread the signal. For example, in FDD, gold codes. In TDD, either scrambling codes of length 16 or codes with a 16 chips are used.

In view of this, having the combined system of Petch'813, Hudson'832 and Esmailzadeh'724, then given the teaching of well established teaching in art, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the combined system of Petch'813, Hudson'832 and Esmailzadeh'724, for the purpose of providing the base station with different families of spreading codes, as taught by well established teaching in art. The motivation being that by providing the base station in each cell with different family of spreading codes, it can reduce the interference among the codes, and enhance the capability to interoperate between multiple codes.

Regarding claim 18, Petch'813 discloses operating receptive radio base station of the adjacent radio transmission systems synchronously with one another (see FIG. 2, GPS receiver 48, note that each BS in each cell has a GPS receiver, thus all BSs are synchronized in accordance with GSP time) in an uplink cycle and in a downlink cycle (see col. 4, lines 42-51, see col. 5, lines 22-26; the wireless communication network system is the over the air loop system, thus the uplink and downlink cycle to/from mobile station is also synchronized with the GPS timing).

8. Claims 19-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Petch (U.S. 6,621,813) and Hudson (U.S. 5,602,832) in view of Esmailzadeh (U.S. 6,259,724).

Regarding claim 19, Petch'813 discloses a device for synchronization within full-duplex-capable radio transmission system with CDMA access with TDD mode (see FIG. 1, a device used in wireless communication network 10, which utilizes CDMA transmission technique and TDD method; see col. 3, lines 60-62, see col. 4, lines 1-9) comprising:

a central radio base station (see FIG. 1, BS 12);

a plurality of subscriber stations which are independent of one another (see FIG. 1, plurality of MS 14 are independent of each other);

a matched filter (see FIG. 6, a match filer, MF 165 of the radio interface module 154) with an amplitude threshold value switch (see FIG. 6, Early/Late comparator 170 of the radio interface module 154), assigned to each subscriber station at a reception end (see FIG. 6, note that Radio Interface module 154 is within the receiving end of the remote MS); and

the radio base station being operative to generate a preamble which is uniform for the radio transmission system (see col. 2, lines 64-67; col. 3, lines 5-9; note that the base station generates a preamble which consists of the timing information, and the timing information is uniform for the wireless communication system since the base station synchronizes its timing form GPS (see FIG. 48, GPS receiver 48),

said preamble being transmittable synchronously in all telecommunications channels from an actual user data transmission to the subscriber station (see col. 2, lines 65 to col. 3, lines 2, 5-12; see col. 5, lines 25-35; note that the base station transmits the preamble via all

channels which corresponds to all remote MSs by way of broadcasting signals or polling signals. Note that preamble is always transmitted before the user data transmission).

Petch'813 does not explicitly disclose spreading with a specific maximum sequence or gold sequence.

However, the above-mentioned claimed limitations are taught by Hudson. In particular, Hudson'832 teaches a) generating at the radio base station (see FIG. 1, CDM transmitter of the base station; Abstract) by spreading with a specific maximum sequence or gold sequence (see FIG. 7, a spreading sequence, i.e., gold code; note that in order to transmit a spreading sequence, the source data (see FIG. 1, source 11) is be spreaded with a gold spreading sequence or code; see col. 2, lines 60 to col. 3, lines 16) which is uniform for the radio transmission system (see col. 1, lines 65 to col. 2, lines 25; note that the base station transmits each data signal with a spreading sequence, which is a gold code through the common channel, which is uniform/consistent in the cellular communication system).

Note that Petch'813 teaches the base station sending a preamble. Hudson'832 teaches base station sending spreading gold sequence via common channel, and the gold sequence and the common channel are consistent for the cellular communication system. Thus, Petch'813's preamble can be modified with Hudson'832's gold spreading sequence. In view of this, having the system of Petch'813 and then given the teaching of Hudson'832, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the system of Petch'813, for the purpose of sending the spreaded gold sequence in the common channel, as taught by Hudson'832, since Hudson'832 states the advantages/benefits at col. 1, lines 30 to col. 2, lines 10 that it would provide a mechanism to

recover the broadcast signal by means of the match sequence with received signal. The motivation being that by utilizing the gold spreading sequence when transmitting from the base station, it will enhance the receiver (i.e. mobile station) capability to easily matches the gold sequence to recover the broadcast signal.

Neither Petch'813 nor Hudson'832 explicitly discloses at least one matched filter with an amplitude threshold value switch assigned to the radio base station at a reception end.

However, the above-mentioned claimed limitations are taught by Esmailzadeh'724. In particular, Esmailzadeh'724 teaches at least one matched filter (see FIG. 3, Matched Filter 13) with an amplitude threshold value switch (see FIG. 3, Accumulator 15; note that accumulator 15 determines whether the output of matched filter 13 exceeds a predetermine threshold with respect of magnitude/amplitude and relative phase of the signals. Thus, it is a amplitude threshold switch) assigned to the radio base station at a reception end (see FIG. 3, base station receiver section 14; see col. 5, lines 30-65).

Moreover Petch'813 teaches an E/L comparator (i.e. threshold value switch), which compares output of the matched filter with the threshold, and switch the data at the mobile station. Esmailzadeh'724 teaches accumulator (i.e. amplitude threshold value switch), which compares output of the matched filter with the threshold, and switch the data at the base station. Thus, Petch'813 threshold value switch at the mobile station can be modified with Esmailzadeh'724's teaching of amplitude/magnitude threshold value switch with regards to amplitude/magnitude and phase of the signals. In view of this, having the combined system of Petch'813 and Hudson'832, then given the teaching of Esmailzadeh'724, it would have been obvious to one having ordinary skill in the art at the time the invention was made to

modify the combined system of Petch'813 and Hudson'832, for the purpose of providing a matched filter with an accumulator threshold switch to the base station and providing the amplitude/magnitude threshold switching mechanism to the both mobile unit and base station, as taught by Esmailzadeh'724, since Esmailzadeh'724 states the advantages/benefits at col. 2, lines 45-67 that it would increase the throughput and reduce the inefficiencies. The motivation being that by implementing match filter and accumulator for determining the access request before the transmission of data, it can reduce the failed random access attempts and thus increase throughput. The motivation being that by implementing the amplitude/magnitude and phase threshold switching mechanism to both mobile unit and base station, it can increase the compatibilities and reduce the fail random access attempts since both mobile and base station have equal amplitude switching mechanism.

Regarding claim 20, Petch'813 discloses wherein the radio transmission system is a wireless local loop system (see col. 4, lines 42-51, see col. 5, lines 22-26; the wireless communication network system is the over the air loop system).

Allowable Subject Matter

9. Claims 14-16 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ian N Moore whose telephone number is 703-605-1531. The examiner can normally be reached on M-F: 9-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ken Vanderpuye can be reached on 703-308-7828. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

INM
9/1/04

KENNETH VANDERPUYE
PRIMARY EXAMINER